I. AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of preparing a metal oxide layer on a substrate, comprising the following successive steps of:

a) dispersing a metal oxide powder in a liquid medium comprising a dispersion solvent and a dispersant, said liquid medium containing neither a plasticizer nor a binder, by means of which a suspension A of said metal oxide powder in said liquid medium is obtained;

b) adding a solution of at least one polymer in a solvent to said suspension A, by means of which a suspension B is obtained;

c) depositing said suspension B on said substrate by a dip coating method, by means of which a green layer is obtained;

d) drying said green layer obtained in step c) to obtain a dried layer; and

e) calcining said dried layer obtained in step d)

to obtain said metal oxide layer on said substrate.

2. (Previously Presented) The method according to Claim 1, wherein the metal oxide layer obtained after step e) has a thickness of 1 μm to 100 μm.

3. (Previously Presented) The method according to Claim 2, wherein the metal oxide layer obtained after step e) has a thickness of 1 μm to 10 μm.

4. (Previously Presented) The method according to Claim 1, wherein the metal oxide is selected from the group consisting of: simple oxides of the transition metals and lanthanides; mixed oxides of transition metals and lanthanides; and mixtures of these simple oxides and mixed oxides.

5. (Previously Presented) The method according to Claim 1, wherein the metal oxide is yttrium-stabilized zirconia of cubic or tetragonal structure.

6. (Previously Presented) The method according to Claim 1, wherein the dispersion solvent comprises a solvent selected from the group consisting of water, ketones, aliphatic alcohols and mixtures thereof.

7. (Previously Presented) The method according to Claim 6, wherein the dispersion solvent is an azeotropic mixture of ethanol and methyl ethyl ketone.

8. (Previously Presented) The method according to Claim 1, wherein the content of the metal oxide powder in suspension A is 1% by weight to 80% by weight.

9. (Previously Presented) The method according to Claim 1, wherein the metal oxide powder has particles the size of 5 nm to 5 µm.

10. (Previously Presented) The method according to Claim 1, wherein the dispersant comprises an ionic surfactant or a non-ionic surfactant.

11. (Previously Presented) The method according to Claim 10, wherein the dispersant is a phosphate ester.

12. (Previously Presented) The method according to Claim 1, wherein the mass content of the dispersant in suspension A is from 0.1% by weight to 10% by weight, relative to the mass of the dry metal oxide powder dispersed.

13. (Previously Presented) The method according to Claim 1, wherein the polymer is selected from the group consisting of poly(aliphatic)esters.

14. (Previously Presented) The method according to Claim 1, wherein the polymer is a polymer obtainable from the reaction between hexamethylenetetramine and acetylacetone in acid medium.

15. (Previously Presented) The method according to Claim 1, wherein the solution of the at least one polymer of step b) furthermore contains the same metals as those of the metal oxide powder.

16. (Previously Presented) The method according to Claim 1, wherein the solution of step b) has a viscosity of 5 mPa.s to 1000 mPa.s.

17. (Previously Presented) The method according to Claim 1, wherein, in step b), the polymer solution is added to the suspension A in a proportion expressed as a mass ratio (r_m) of 0.01 to 3.

18. (Previously Presented) The method according to Claim 1, wherein in the dip coating method of step c), the substrate is removed from the suspension B at a controlled rate of 0.1 cm/min to 100 cm/min.

19. (Previously Presented) The method according to Claim 1, wherein the drying is carried out at a temperature ranging from room temperature to 150°C.

20. (Previously Presented) The method according to Claim 19, wherein the drying is performed over a period of time of 1 min to 10 h.

21. (Previously Presented) The method according to Claim 1, wherein the calcining of step e) is carried out at a calcination temperature of 200°C to 1800°C.

22. (Previously Presented) The method according to Claim 21, wherein the calcination temperature is reached, starting from room temperature, at a rate of increase of 0.1°C/min to 100°C/min.

23. (Currently Amended) The method according to Claim 21, wherein the calcination temperature is maintained for a time of 2 seconds to ~~10 h~~ several hours.

24. (Previously Presented) The method according to Claim 1, wherein, in step e), the metal oxide layer and the substrate undergo a simultaneous sintering, or cosintering, operation.

25. (Previously Presented) The method according to Claim 1, wherein the substrate is a fully dense substrate.

26. (Previously Presented) The method according to Claim 1, wherein the substrate is a porous substrate having an open and/or closed porosity ranging up to 50% by volume.

27. (Previously Presented) The method according to Claim 1, wherein the substrate is selected from a group consisting of metal substrates; optionally doped ceramic substrates; glass substrates; and composite substrates formed from two or more of metal substrates, optionally doped ceramic substrates, and glass substrates.

28. (Previously Presented) The method according to Claim 27, wherein the substrate is a porous Ni-YSZ cermet substrate.